No. 975—S-M—102714

E. C. SIMMONS

KEEN KUTTER

TRADE MARK REG. CUTLERY AND TOOLS U.S. PAT. OFF.

Furniture Designs

for users of

KEEN KUTTER TOOLS

INTRODUCTION

IN this booklet are a few working drawings, and descriptions of simple and artistic Craftsman furniture.

With a small outfit of good tools any man or boy who has the slightest inclination will have no difficulty in making any of the pieces here described, which, however, depends upon the tools.

You cannot plane a table top, for example, so that it is smooth and true, with a plane that bucks or gouges out the wood. You cannot saw straight with a saw that is improperly balanced or set.

Most of the joining in these designs is done by means of mortises and tenons which require tools of great keenness and accuracy.

It is a very simple matter to buy good tools—much simpler than you would suppose.

If you were dependent upon your own knowledge and experience, it would indeed be a difficult task, and it was just for this purpose of identification and to remove all risk from tool buying that the Simmons Hardware Company, Inc., over forty years ago, put on the market the famous line of **KEEN KUTTER** tools.

Every tool marked with this name and trade mark is the very best that can be produced and is guaranteed to be perfect in every respect.

This guarantee is a real guarantee. It means that if the tool proves unsatisfactory in any respect, even after being put to hard use, your dealer is instructed to refund the money or replace the tool.

It goes without saying that the manufacturers never would back up an entire line of tools with such a guarantee unless they were absolutely certain that every tool was right before it left the factory. Every **KEEN KUTTER** tool, in fact, has been subjected to much more severe strains and tests than it would ever be called upon to endure in actual work.

So, whether you want a saw or a screwdriver, a chisel or a file, a hammer or a square, the way to be sure of getting a tool of perfect quality, temper, adjustment and balance is to ask for it by the name **KEEN KUTTER**.

"The Recollection of Quality Remains Long After the Price is Forgotten."
TRADE MARK REG. IN U. S. PAT. OFFICE. —E. C. SIMMONS.

If **KEEN KUTTER** tools are not at your dealers, write us.

SIMMONS HARDWARE COMPANY (Inc.),
St. Louis and New York, U. S. A.

INTRODUCTORY ARTICLE BY THE ORIGINATOR AND DESIGNER OF THE FAMOUS CRAFTSMAN FURNITURE

ASIDE from the personal pride and satisfaction derived from the making of any object of use or ornament with one's own hands, there is a mental development in cabinet work, perhaps more than any other form of manual training, which makes for self-discipline, honesty and sturdy character building.

Something of the conquering spirit which makes the successful man in almost every department of human achievement is generally traceable to the discipline and shaping influence incident to the mastery of the details of some form of manual labor in early life.

The pleasure of shaping things is a primitive instinct. Almost every boy or man is given some natural tendency or capacity, and he who spends a few leisure hours in working out the details and studying the results of his own handiwork has found a source of personal gratification and expression of himself that will more than repay the time and labor expended. The restless activity of the growing boy, whatever his grade in life, or however fortunate his surroundings, is a normal expression of his nature. Upon the direction of this activity during the formative years of his life depends the success or failure of his future career and the measure of his coming usefulness as a citizen.

Honest work has never yet degraded man or boy, and when an over-indulgent parent encourages in a child the false notion that he has no need to work with his hands, that parent is trifling in dangerous fashion with forces as strong as fate in shaping life for good or ill. The natural instinctive pride of a boy in being able to do something needs only to be directed into some channel adapted more or less to his tendencies and capabilities to furnish a right and healthful outlet for the energies that work so much mischief when wrongly applied.

It is just here that manual training and especially skill in wood working can be made to carry an almost irresistible appeal to the boy in the home, as something that he can learn to do, and to do well, if given the opportunity, tools and material.

The cost of an outfit is trifling as compared with its importance as a factor in moral and mental development and also as a means to self-discipline.

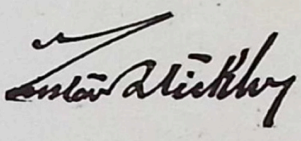
Tools, but they must be good tools.

In the choice of wood it is important that you select the kind best suited to the requirements of the articles you are to make. If the articles are to be plain and primitive in construction, woods should be chosen which have a texture and color quality like the oak, chestnut and brown ash.

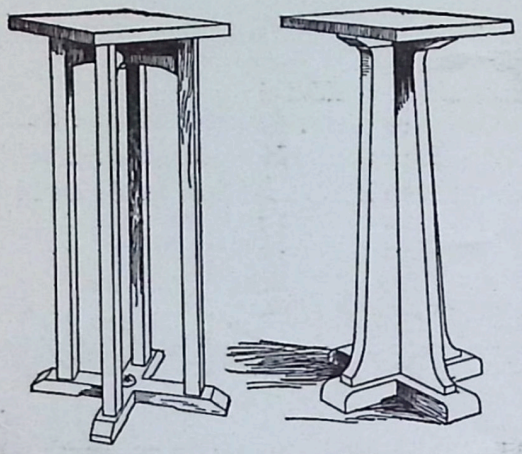
If the piece is to be exposed to the weather, cypress, spruce and white cedar will give the most pleasing effect when finished with the well-known shingle stains and then left to weather.

These simple processes of the treatment of wood surfaces can be developed to a high degree of artistic tone and texture.

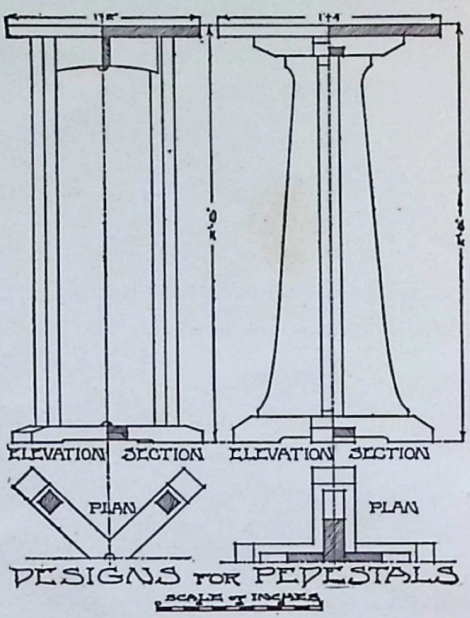
Cabinet making in the home is not only a source of inspiration and self-training for the boy, but the professional man and others will find pleasure and relaxation during leisure hours in building something useful or working out some original notion in that friendliest and most useful material that nature has given to man—wood.



JARDINIERE PEDESTALS



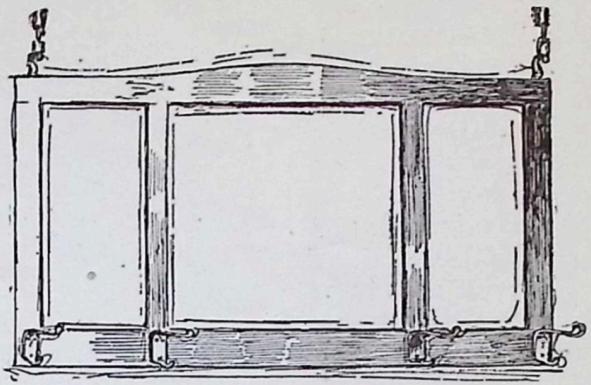
Pedestal No. 1 Pedestal No. 2



PEDESTAL No. 1. Two cleats are made and each one is halved so that one slips over the other in the form of a cross. The cleats are mortised into the post and fastened with dowel pins that run through both posts and mortises. The base, which is also in the form of a cross, is made in the same way. The under side of the base crosspieces is sawed out, leaving an opening under the central part so that the stand rests upon the ends of the base. The posts are carefully mortised into the base; a small hole is bored in the center of the cross and a pin with large head and shoulder is driven in until the shoulder fits tightly into the wood; a similar pin fastens the cross cleats at the top. The stand is 32 inches high and the posts are 1¼ inches square. The pieces that form the base are 3 inches wide by 1½ inches thick. The cross cleats under the top are ¾ of an inch thick, shaped so that the lower part is slightly curved. The posts are framed together so that the distance across them is 10¼ inches each way. The top is 14 inches square and is screwed on with table clamps just as a table top would be.

PEDESTAL No. 2 is a single standard formed of four pieces of wood sawed to the shape of the pattern. The outer edge is sawed at an angle, while the inner edge should be at right angles with the base. The inner edges are beveled so that they meet in a point at the center. When all is carefully fitted the standard is glued together. The cross cleats under the top are halved and glued, then fastened to the top of the standard with dowel pins. The base is halved and firmly doweled to the standard and table clamps are used to fasten on the top. The height of this stand is 32 inches, the top 16 inches square and 1⅛ inches thick. The cleats under the top are 2x3 inches, the base 2½x3½ inches, and the wood forming the standard is 1½ inches thick.

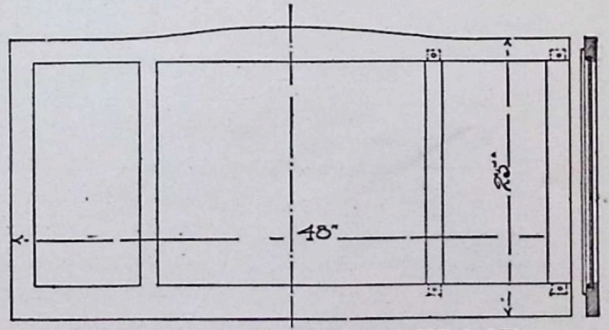
HALL MIRROR



THIS frame is of Oak, and is made with the mortise and tenon construction, the different parts being carefully doweled together. It is 48 inches wide by 25 inches high, and the severity of the frame is relieved by the slight curve at the top. A groove is left in the back of each section of the frame to hold the glasses, which should all be heavy beveled mirrors. Small cleats tacked to the frame bind the glasses tightly into the grooves; then the back is laid on, covering all three mirrors, and is screwed firmly to the frame.

The mirror is hung from either beam or picture rail by wrought iron chains and fastened to hooks in the top of the frame.

The hat and coat hooks at the bottom are very easily made by anyone who is at all used to metal work, or they may be purchased.



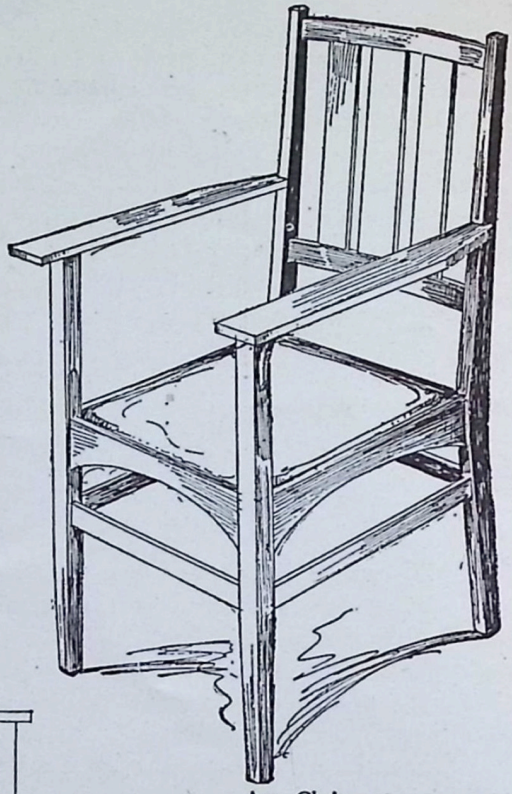
DESIGN FOR A HALL MIRROR

SCALE OF INCHES

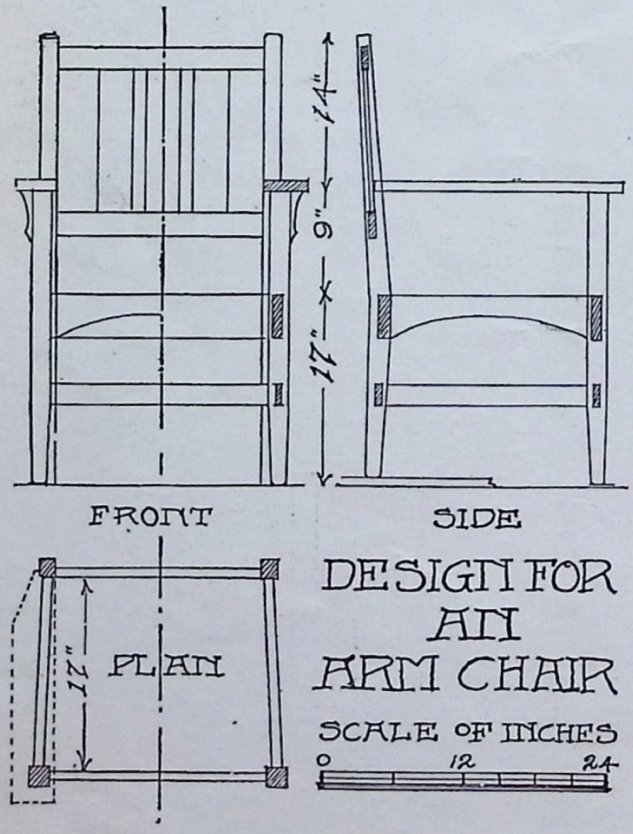
0 6 12

ARM CHAIR AND SIDE CHAIR

IN shaping the wood for this side chair the front posts should be tapered slightly from the bottom rail down to the end. The greatest care should be given to all details of construction; otherwise the piece is liable to be shaky. Therefore, all the rails which are tenoned at the ends and fitted in the mortises at the posts are firmly screwed with dowel pins or little round pegs of wood. They may either be made on a lathe or ordered from some shop where they are made by machinery. As the pins should be no larger than necessary, it is sufficient to have them 5/16 of an inch in diameter. In making a chair

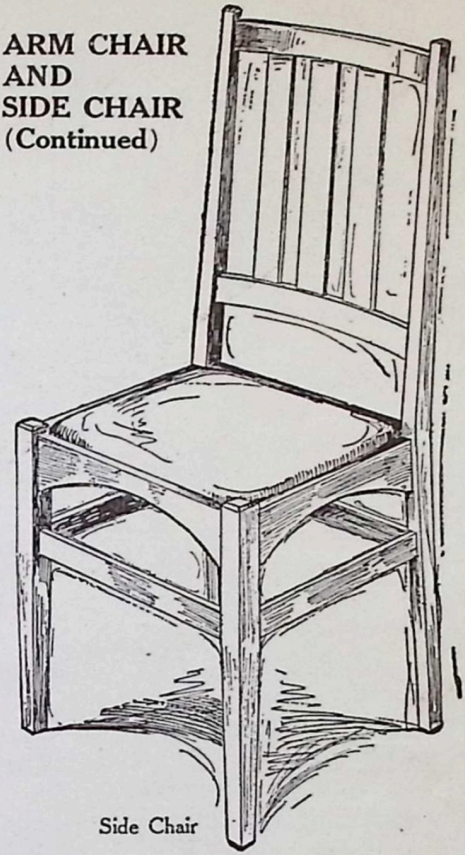


Arm Chair



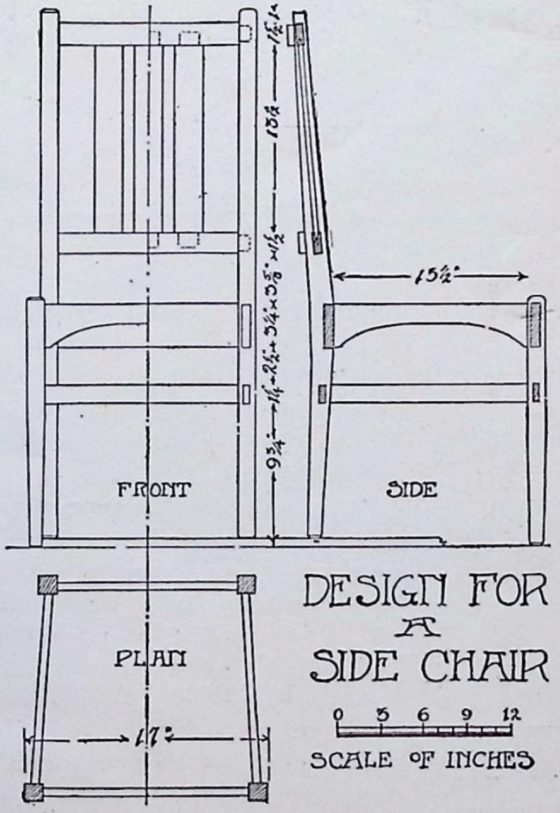
of this kind, the whole frame should be plumb so that the seat is absolutely level, but as this would make the chair very uncomfortable, the right slant is given after the piece is completed. This is done by cutting ½ or ¾ of an inch off the bottom of each back post. The back rail, which forms part of the seat rail, should be set a little forward so that it is flush with the face of the back posts. The small side rails are centered in the posts, and a small corner block should be screwed into each corner to support the inner seat frame. This block should be put in so that a space of 1¼ inches is left between the top of

ARM CHAIR AND SIDE CHAIR (Continued)



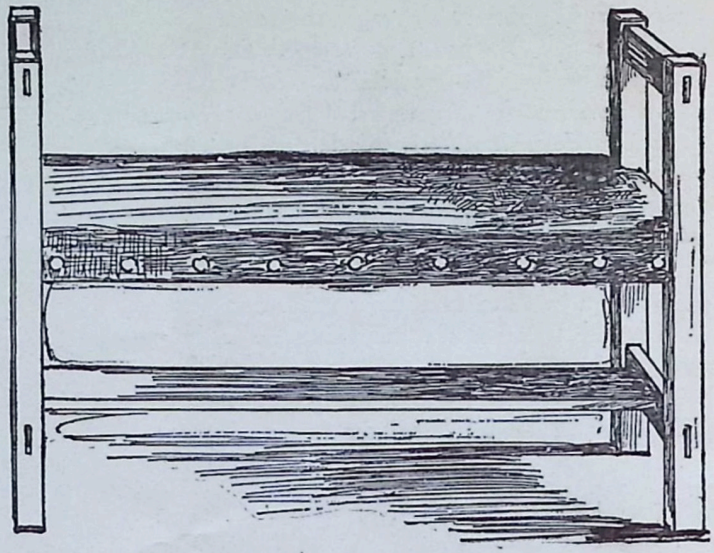
Side Chair

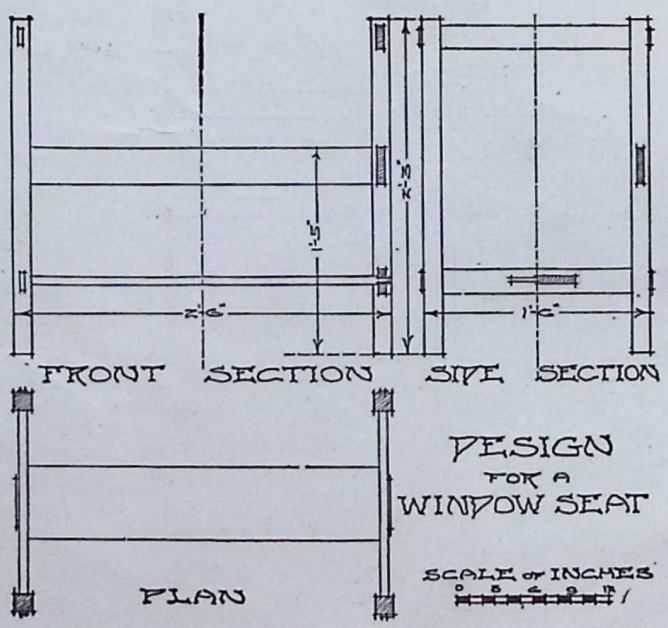
the block and the top of the seat rails. The upper and lower rails which extend between the two back posts are mortised and doweled through. The three upright slats are also mortised into the rails, but without the dowel pins. The inner seat frame is made with what is called a slip seat, or a seat that is made and upholstered separately, and then slipped inside the frame of the chair. The seat frame may be made of 1⅓x¾-inch hardwood, with the corners mortised and firmly glued. Care should be taken to make it small enough to slip into the frame of the chair after the leather has been drawn over. The seat itself is made by tacking strips of strong webbing about 3½ inches wide over the top of this inner frame. These strips are interlaced like basket work so closely that it is almost solid, and when stretched tightly over the frame and tacked firmly it forms a strong support for the padding above. This padding is made of soft cotton, which is picked over and laid evenly over the whole surface of the seat, padding the center a little more thickly than the edges. The leather covering should then be stretched tightly over both padding and frame and tacked on the under side of the frame. Lastly, a square of some thin, cheap material should be tacked neatly over the whole bottom, concealing the webbing and the edges of the leather.



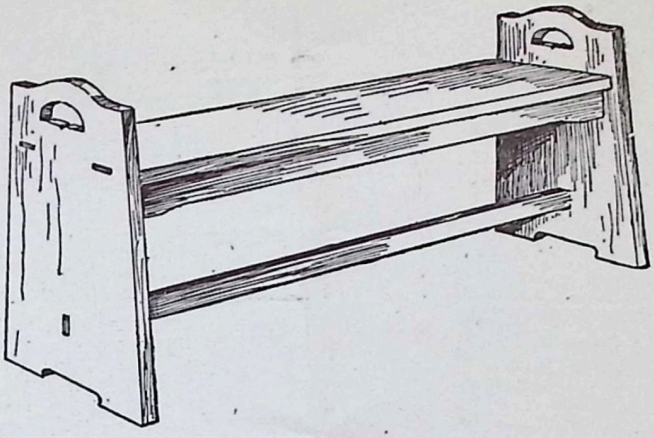
WINDOW SEAT

OF course, the space in which this window seat is to stand will determine its length. As shown here, it is 2 feet 6 inches long. The seat is 18 inches deep and 17 inches high, and the arms measure 27 inches in height from the floor. The posts at the corners are 1⅝ inches square. The ends of the seat are made by mortising the two posts together with a rail at top and bottom. A stretcher made of ¾-inch board 6 inches wide is mortised to the two lower rails. The frame which supports the seat is fastened to the posts with dowel pins, which are so placed that the pins on the end rails slip between those of the side rail. The seat frame is covered with canvas, which is stretched tightly over it, wrapped around and nailed underneath; packing or floss is laid on top of this to make a comfortable cushion, over which leather is stretched and tacked to the under side of the rail. The leather is wet before it is stretched over the frame, and as it dries it shrinks into place. If ornamental nails are desired they can be put around the seat frame after the leather is in place.

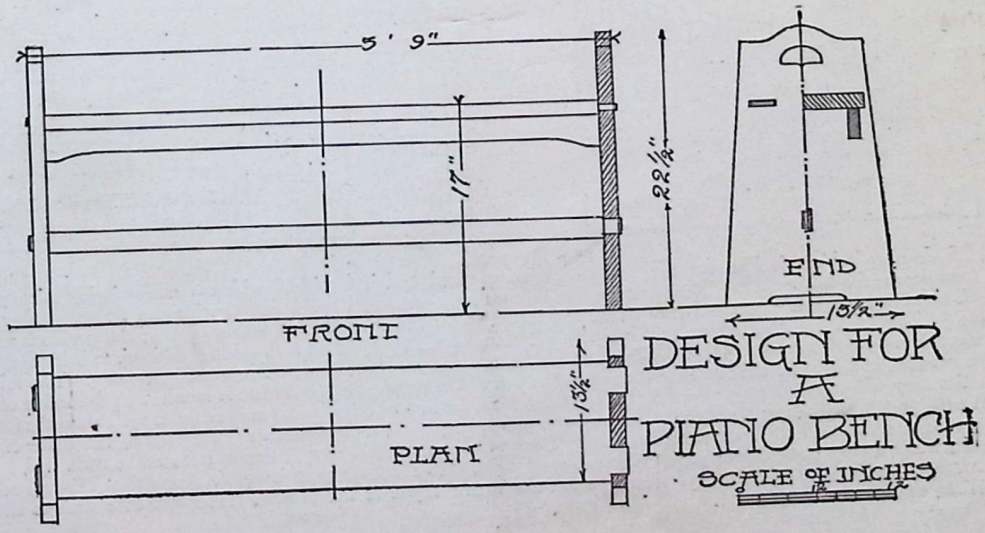




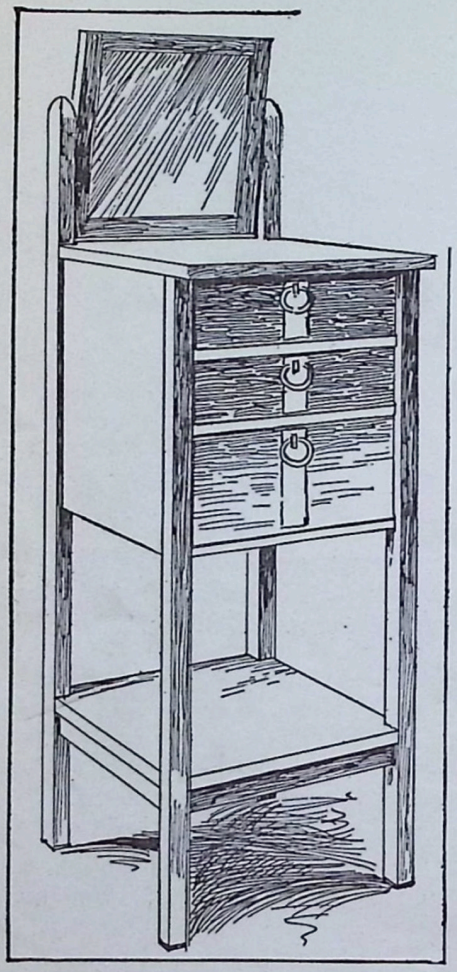
PIANO BENCH

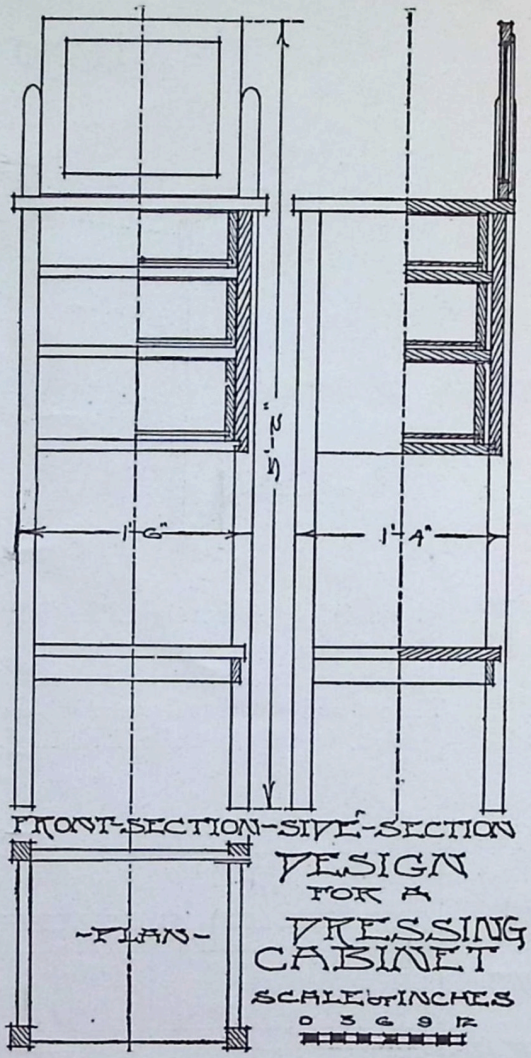


THIS bench is 22½ inches high, 3 feet 9 inches long, 13½ inches deep. The end pieces and seat should be made of 1⅛-inch stock. The center brace across the bottom should be 2¼ inches square, and the stretchers underneath the seat should be 2½ inches wide by 1⅛ inches thick. The seat and bottom brace are mortised clear through the end pieces, the tenons being allowed to project, carefully beveled and smoothed.



DRESSING CABINET

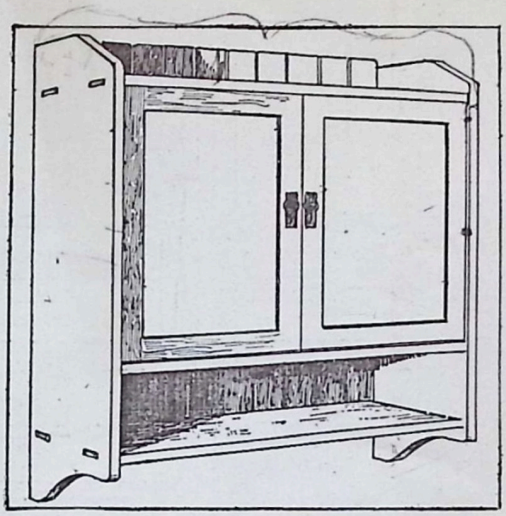


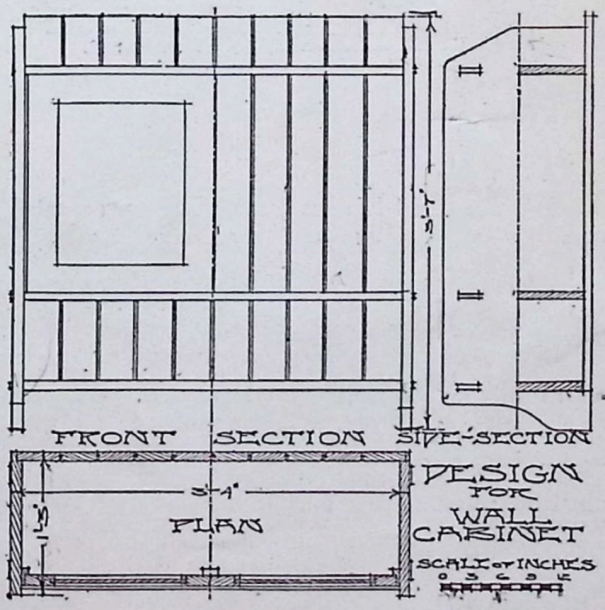


THIS dressing cabinet is like the old-fashioned shaving stand, and is furnished with a small swinging mirror, three drawers and a lower shelf. The stand is 5 feet 2 inches high over all, 1 foot 6 inches wide and 1 foot 4 inches deep.

The mirror frame is made of 1-inch stock, 1¾ inches wide; the posts are 1½ inches square; the partitions and the shelf are ¾ inch thick and the rail under the shelf is 2 inches wide by ¾ of an inch thick. This piece is framed in the usual way, the only difference being that the back and sides are not paneled; the partitions are also solid. The mirror is swung upon pins, and is constructed as follows: Near the top of the standard a metal plate is mortised on the inside of each post so that they will come directly opposite similar plates mortised in the edge of the mirror frame; a hole is then drilled through each post, which allows a pin or binding screw to slip through, and a metal washer is screwed to the outer edge of the post with countersunk head screws. The binding screws are made with a ring or thumb knob at the outer end, so that the mirror, which swings upon these pins, may be easily adjusted. The drawer pulls are plain round rings of either copper, brass or iron, placed against metal straps which extend the whole depth of the drawer. The drawer is made to slide on center cleats, as described on page 24.

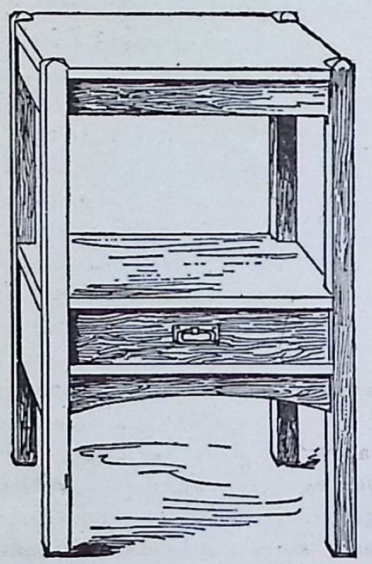
WALL CABINET

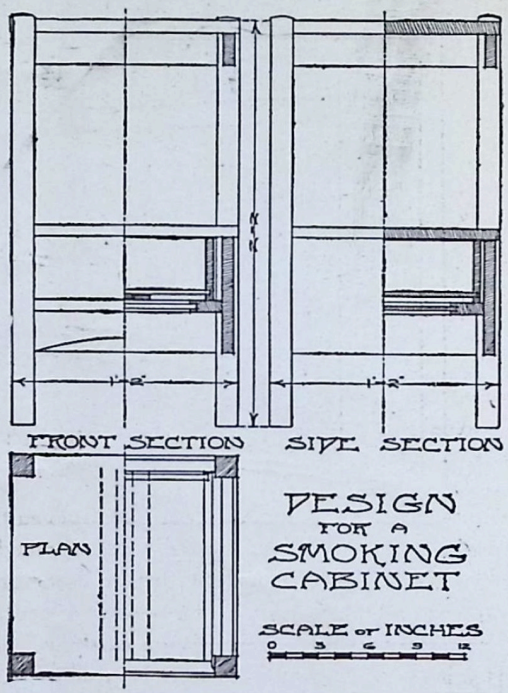




THIS cabinet is 3 feet 7 inches high over all, 3 feet 4 inches wide and 1 foot 3 inches deep. The sides are made of 1⅛-inch stock and the shelves are ⅞-inch stock. The doors have each one large square panel set in a frame 3 inches wide. The upper and lower shelves are tenoned through the sides, the tenons being allowed to show as a relief to the plainness of the side pieces. The tenons of the middle shelf are not allowed to show. The back, which is made of beveled boards, is screwed to the shelves, one screw being used for each board. To allow for shrinkage and expansion these screws are placed in slots instead of close-fitting screw holes.

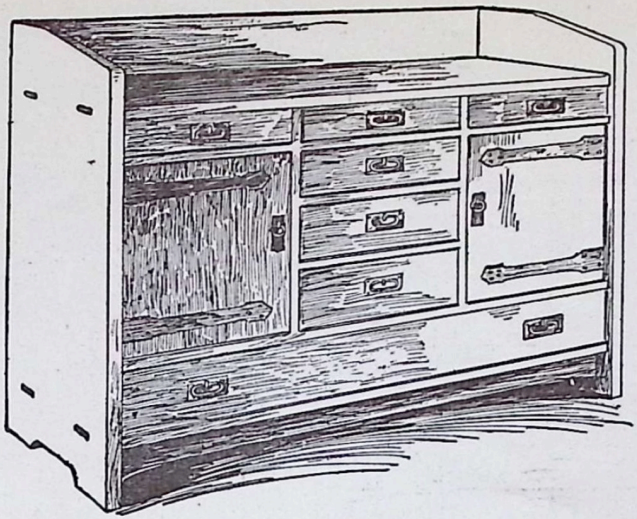
SMOKING CABINET



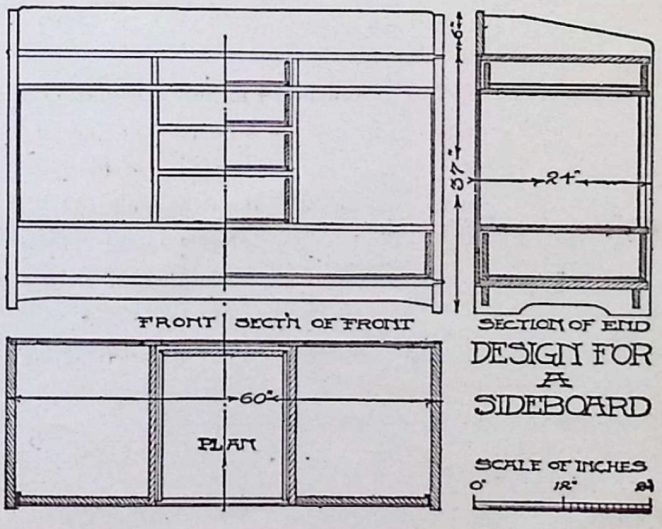


THIS cabinet is 26 inches high, 14 inches wide and 14 inches deep. The posts are 1½ inches square, and the top is made of a board ⅞ of an inch thick. The drawer front, rails and lower shelf are made of ¾-inch boards, and the panel under the drawer has a frame of the same thickness, with the panel itself made of ⅜-inch stuff. The drawer back is ⅝ of an inch thick. The straight rails at the sides are 7½ inches deep, the bottom being on a line with the corners of the curved front rail. The four posts are fastened together by rails placed under the top and also under the lower shelf, the rails being fastened with dowel pins. The corners of the top and shelf are cut out to fit around the posts and the posts are rounded at the top and beveled at the bottom in the usual way. The drawer slides on cleats, as described on page 24.

CRAFTSMAN SIDEBOARD

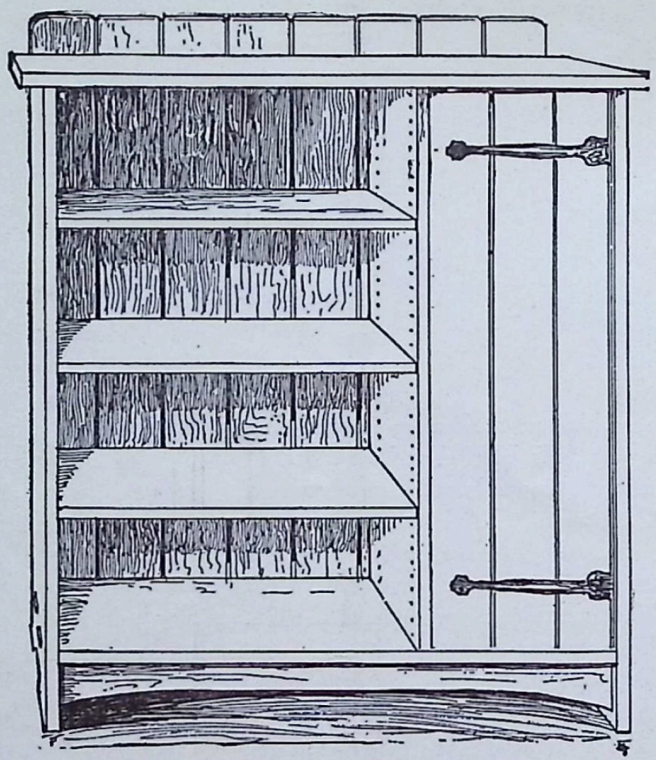


THIS sideboard is 5 feet wide, 2 feet deep and 43 inches high. The top and bottom shelves are made of boards 1 inch thick, and the inner shelves, which serve as top and bottom of the cupboards are 7/8 of an inch thick. The ends should be made of boards 1 1/8 inches thick, selected with special care with regard to beauty of texture and grain. The back is paneled; 3/4-inch stock being used for the frame and 1/2-inch stock for the paneling. The drawer fronts are made of 3/4-inch stock, and the drawer backs are made of the same; the sides 5/8 of an inch and bottoms 3/8 of an inch. The top and bottom shelves are tenoned through mortises in the sides. The tenons are allowed to show, being carefully beveled and smoothed off. These shelves are solid, but the two inner shelves, which separate the cupboards from the drawers above and below, are paneled, the panels being framed in 4-inch rails. This is done in order to give play to the shrinking and swelling of the wood. The frames of the panels are carefully glued together, but the panels themselves are simply fitted in without glue, so the wood can move a little as it shrinks or swells. The upright partitions are solid. The two doors are made of chestnut or any soft wood, and are framed instead of paneled. This process is just the same as paneling except the panels are the same thickness as the frame, so that the surface is flat and smooth. After the doors are framed they should be veneered on both sides with oak like the rest of the piece. When finished, these doors should be 1 inch thick. Two stretchers are glued under the bottom of the sideboard, and corner blocks are used inside these stretchers to give additional strength. The drawers are made to slide on center cleats, as described on page 24.



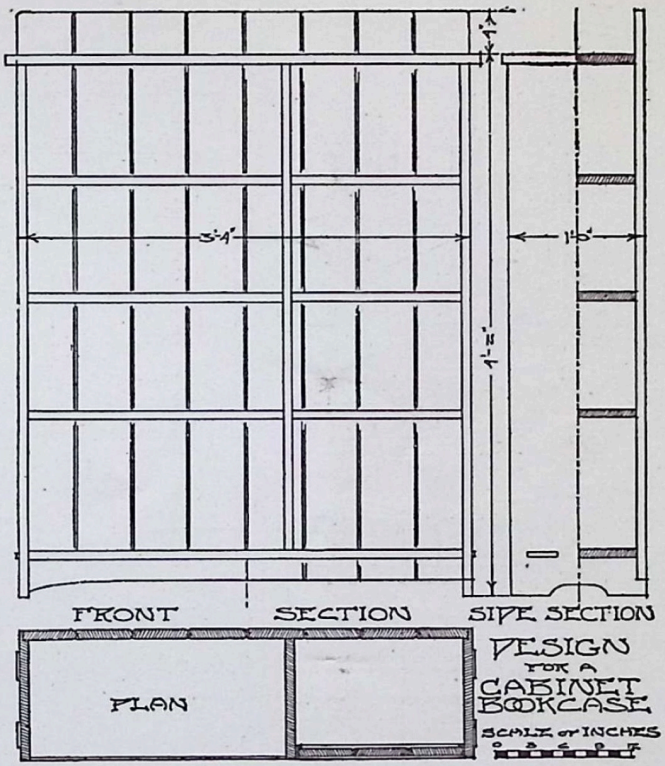
DESIGN FOR A SIDEBOARD

CABINET AND BOOKCASE



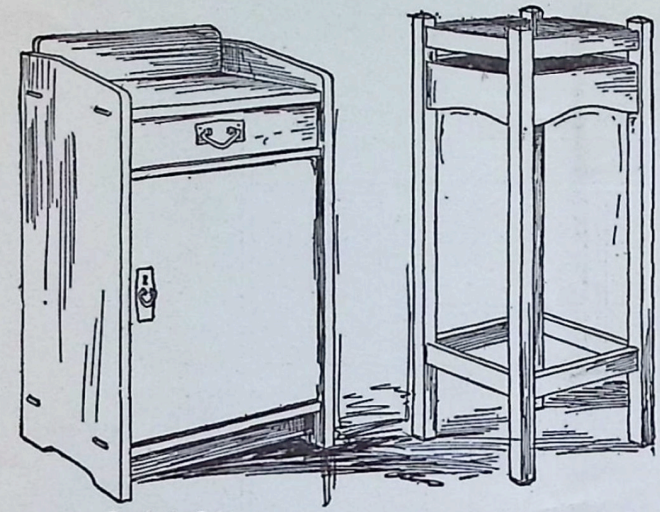
THE size of this cabinet would be determined by the place it is to occupy, care being taken to preserve the right proportions. As shown here, it is 4 feet 2 inches high to the top shelf, and the back extends 4 inches above that. The width is 3 feet 4 inches and the depth is 12 inches. The ends are solid, and the tenons of the bottom shelf project a little through the mortises. The top, which has a fairly wide projection at the front and sides, is made of carefully selected boards joined together and fastened to the posts by means of iron clamps or couplings such as are generally used on table tops. The partition which separates the cabinet from the shelves is made of

CABINET AND BOOKCASE



boards as thick as those on the ends. In the sides of this partition and in the ends of the cabinet holes are bored, at intervals, from top to bottom, so that the shelves are adjustable, resting as they do upon small metal shelf supporters which fit into the holes. The back of the cabinet is made of V-jointed boards. The door is made in the same way. This door is attached to a ¼-inch jamb, fastened to the side of the cabinet opening. The boards at the back are screwed to the top and bottom shelves, one screw at top and bottom of each board being sufficient. The screw holes should be slots large enough to allow play for expansion and shrinkage.

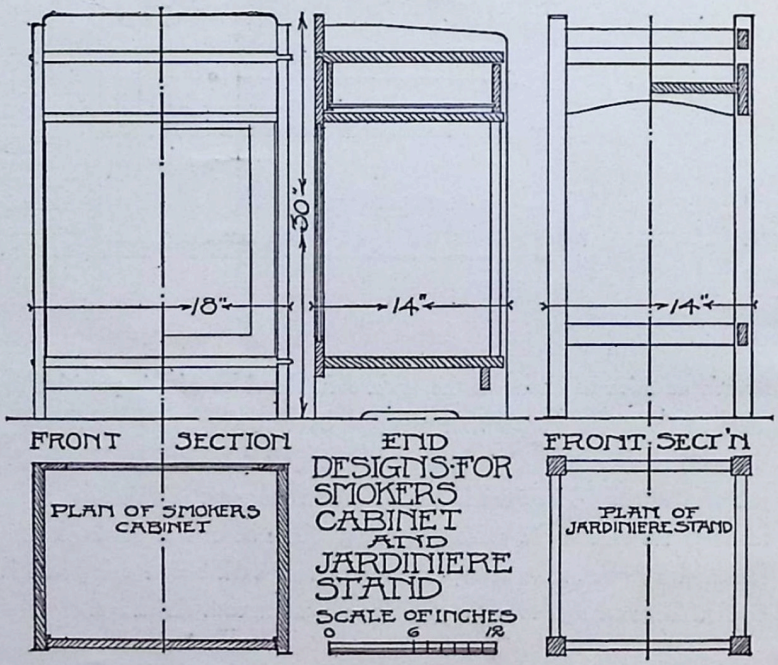
SMOKER'S CABINET AND JARDINIERE STAND

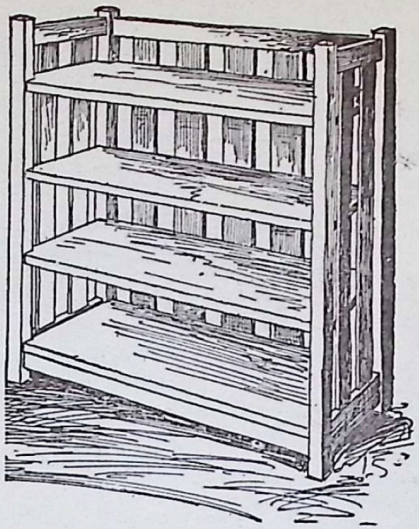


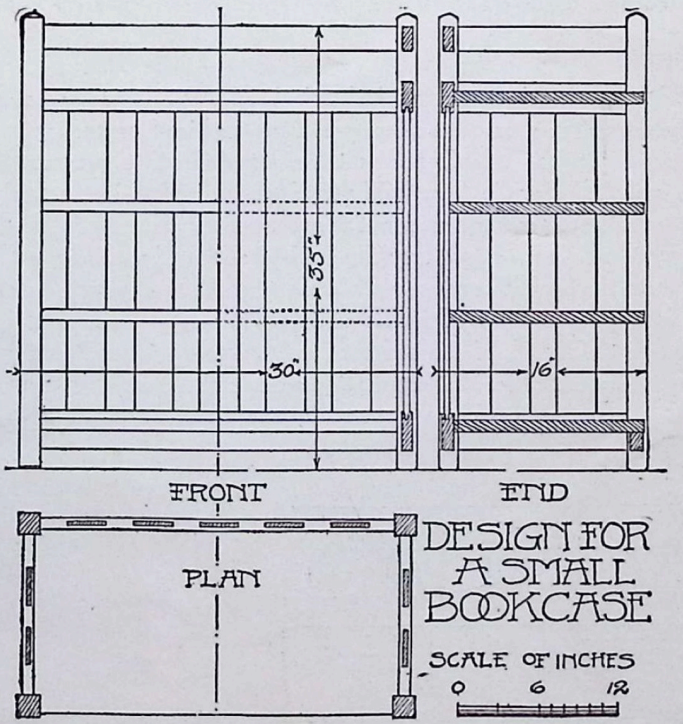
Smoker's Cabinet Jardiniere Stand

THIS cabinet is 30 inches high, 18 inches wide, 14 inches deep. The sides are made of 14-inch boards, if good ones can be obtained. If not, make each side of two or more narrower boards, glued together, 1-inch stock to be used. For the top and bottom 7/8-inch stock is best; for the partition between the drawer and the door 3/4-inch boards should be used and 5/8-inch stock for the paneled back. The top and bottom shelves are mortised through the sides, the tenons being beveled and smoothed and allowed to project slightly. The construction is further strengthened by running a stretcher under the bottom to connect the two sides. The drawer is made to slide on center cleats, as described on page 24.

THE jardiniere stand, as shown here, is 14 inches square and 30 inches high; the posts measure 1½ inches square and the stretchers are made of 7/8-inch stock. The shelf to hold the jardiniere is placed about 4 inches down from the top rail. It is concealed by the wide stretchers that are curved at the bottom, the narrower top stretchers thus forming a protection and support for the jardiniere. The stretchers are merely doweled to the post and the dowels glued and clamped tightly together.



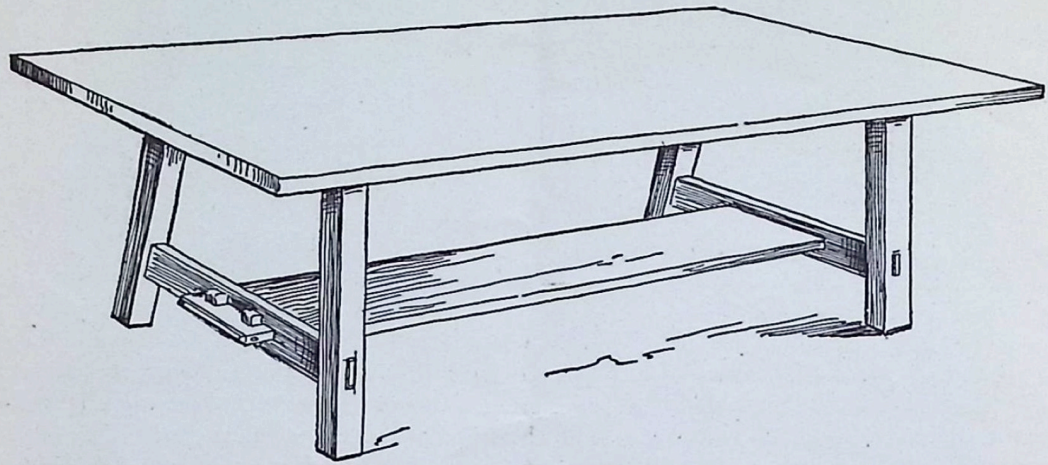




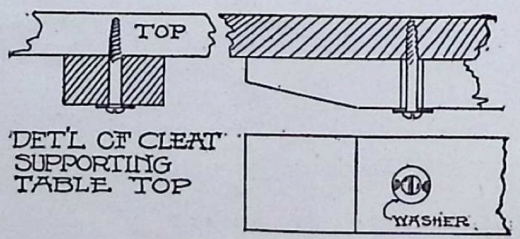
BOOKCASE

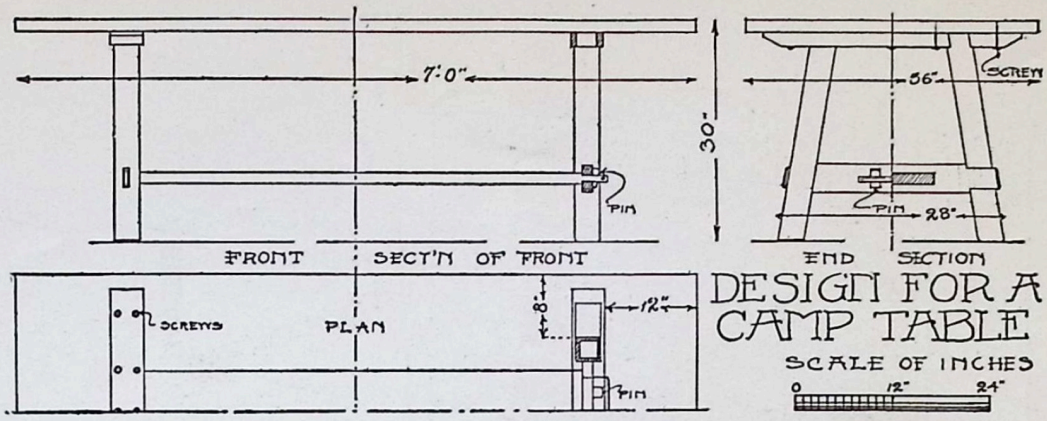
THE design for the bookcase shows a model 35 inches high, 30 inches wide and 16 inches deep. The posts measure 1⅝ inches square and the shelves are made of ⅞-inch stock. The stretchers at the top and bottom are connected to the posts by dowel pins. The wide slats that form the back and sides are mortised into the stretchers at top and bottom. The shelves have the corners notched out to fit around the posts. Holes about ¼ inch in diameter might be bored into the posts on the inner side to hold little brass dowels, which support the shelves. If the holes are bored 1 inch apart up and down the posts, the shelves may be adjusted at any height desired. These brass dowels can be procured at any hardware store.

CAMP TABLE



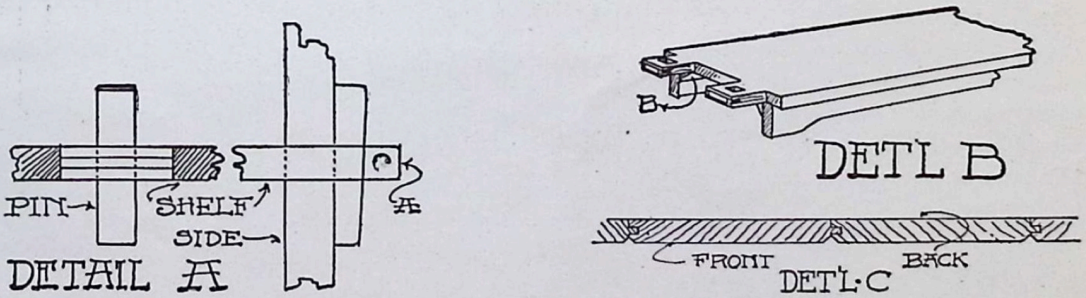
THIS table is 7 feet in length, 36 inches in width and 30 inches in height. The projection of the top is 12 inches at either end and 8 inches at the sides. The posts which form the legs are 3⅜ inches square. The edges at the lower end of each post are rounded off to prevent the posts from splintering when the table is shifted over the floor. The top is of planks 1¾ inches thick. These planks should be carefully selected so that the grain does not vary too much, and may be made of either tongued and grooved boards, or of plain boards carefully finished at the edges and put together with dowel pins. The end posts are framed together with a cleat at the top, which is fastened to the under side of the table top. This cleat is 4 inches wide by 2 inches thick, and the posts are mortised through it as shown in the details of the end section. A tenon is made on the end of each post, leaving a ¼-inch check or shoulder that fits tightly against the cleat. The end





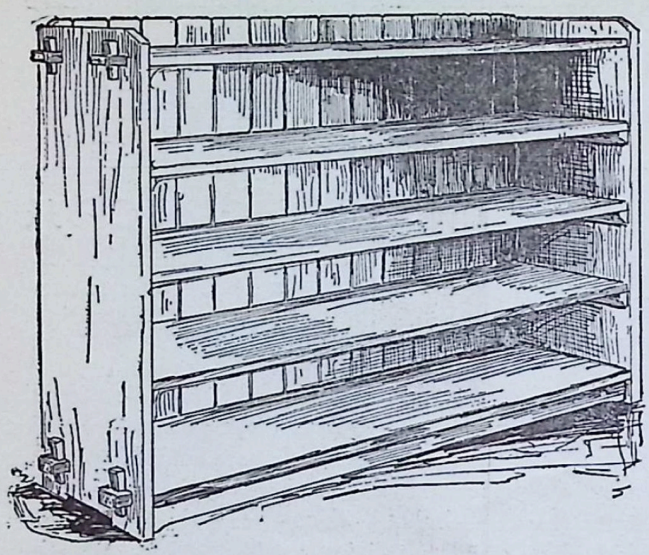
rails are also fastened to the posts with a mortise and tenon, the tenon being left to project slightly, and these four pieces are framed and glued. The top is then fastened to the ends with screws that run through the cleat. These screws are slipped through slots in the cleat that are made large enough to allow for expansion or shrinkage. Washers should be used under the heads of the screws to prevent wear on the cleat from friction. The stretcher or shelf that holds the two ends of the table together is 10 inches wide by 1½ inches thick. The broad tenon is cut on either end to slip through the end rails, and these tenons are left sufficiently long to allow two wedge-shaped pins to be driven through each one. In order to prevent splitting, the end of the tenon is strengthened by boring a hole about ⅜ of an inch in diameter through the end and driving in a dowel pin, as shown in detail "A." In order to take the table apart, it is necessary only to take out the screws that fasten the top and knock out the pins in the tenons of the lower shelf.

Detail A, B and C for Camp Bookcase



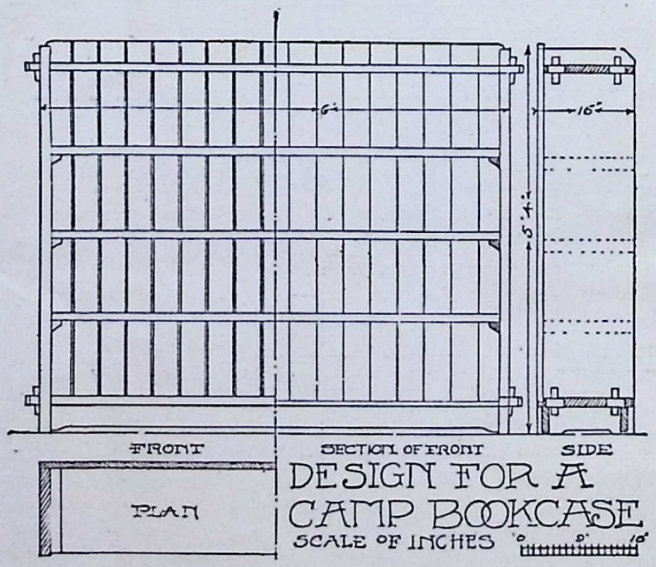
For Bookcase complete, and design for making, see page 20.

CAMP BOOKCASE

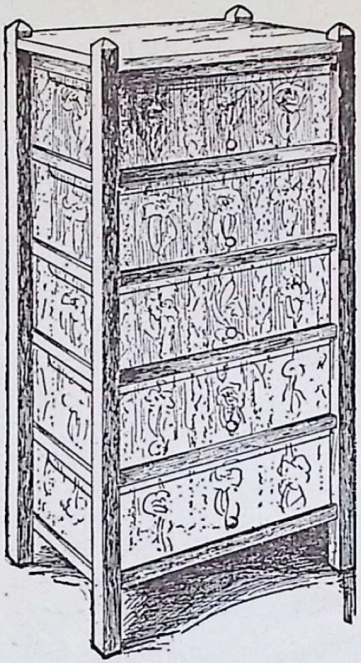


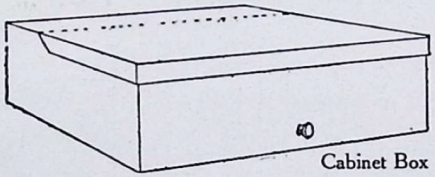
THIS bookcase is 5 feet 4 inches high, 6 feet wide and 15 inches deep. The ends are made of boards 1¼ inches thick and the shelves 1 inch thick. The cleats supporting the shelves are made of triangular strips 1½ inches thick. The case is held together by the top and bottom shelves, which are fastened to the ends by means of projecting tenons with sturdy pins driven through them. A check or shoulder on these tenons is made only at the sides, so that the projecting tenons are left at their full thickness. The construction of this joint is shown in detail "A." All the other shelves are loose, as they are not needed in the actual construction of the case. They are supported on cleats which are screwed to the ends. Detail "B" shows the construction of the bottom shelf, showing how the back and front rails of the shelf are all glued together. Letter "B" in this same detail shows the triangular cleat, called the glue block, that is glued in the corner where the shelf joins the rails, and furnishes a brace that greatly strengthens the construction. The back of the bookcase is made of V-jointed boards 4 inches in width. A tongued and grooved construction of these boards is shown in detail "C." Each of these boards is screwed to the top and bottom of the case, one screw for each board. The boards should be numbered so that in putting the case together the screw holes will always meet.

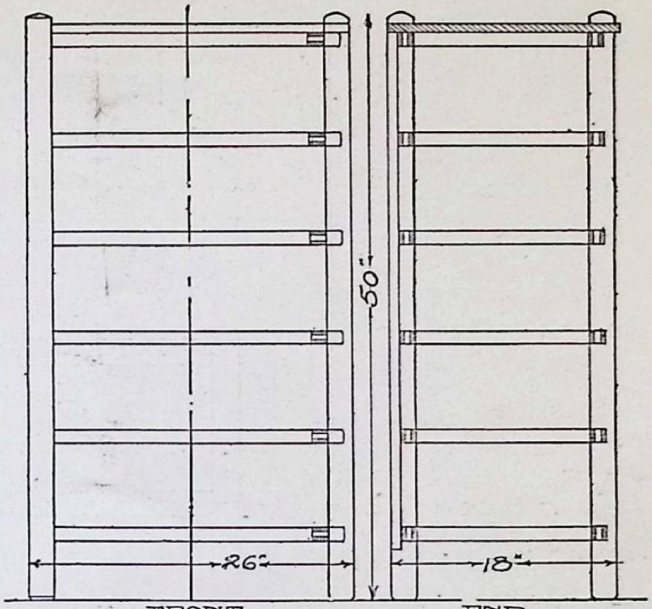
For Details A, B and C, see page 19.

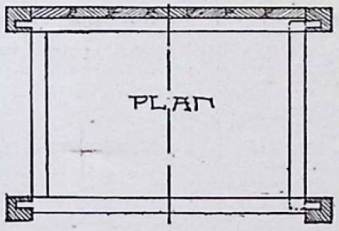


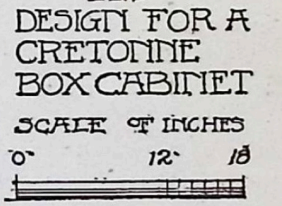
CRETONNE BOX CABINET



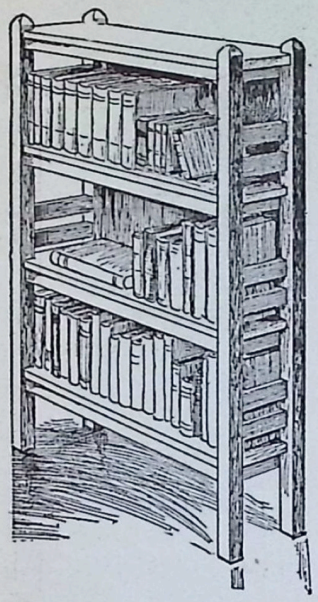








THE box cabinet shown here is 50 inches high, 26 inches wide and 18 inches deep. The posts are 2 inches square and the stretchers are made of strips 1¼ inches square. The top is ¾ of an inch thick and the back is made of V-jointed boards ¾ of an inch thick. The front and back stretchers are so placed that they are flush with the inside edges of the posts. Tenons are cut at the ends of these stretchers with a shoulder on either side, but not on the top or bottom. The side stretchers are mortised into the front and back stretchers so that they fit closely against the posts. The back is fitted into the space left behind the back stretchers; it is made flush with the outer edge of the posts. The top is notched at each corner so that it fits around the posts, which project above. The joints are all made with dowel pins and are carefully glued into place. Bevel the bottoms of the posts so that they will not splinter when the piece is moved. Five cretonne-covered pasteboard boxes should be provided to fit into this framework. The dimensions should be observed with great care, as the boxes ought to slip freely into the openings, leaving a space of about ¼ of an inch at the top and on each side. The cover should be hinged about 10 inches from the front, as this will allow the box to be drawn out to two-thirds of its length and the cover lifted without the necessity of removing from the frame.



BUNGALOW BOOKCASE

THE dimensions of this bookcase are 48 inches high, 36 inches wide and 10 inches deep.

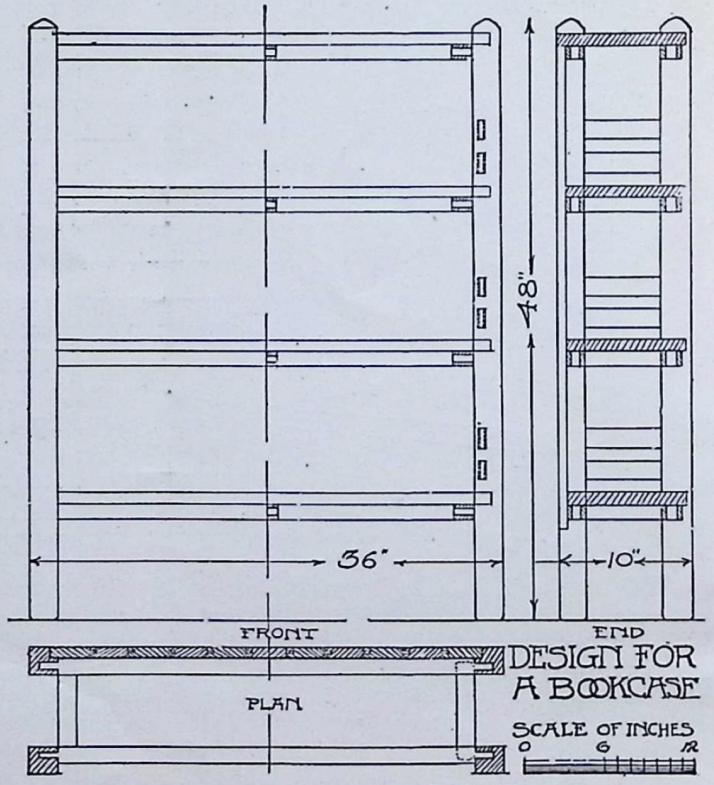
The posts are 2¼ inches square and the stretchers 1½ inches wide by 1⅛ inches thick. The shelves are ¾ of an inch thick and the slats at the end are ½ inch thick.

These slats are mortised into the posts at each end of the bookcase just above the shelves, so that they will support the books at the ends.

The shelves and top are notched at the corners to fit around the posts, which project above the top and are rounded off.

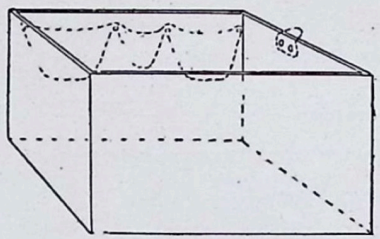
The bottoms of the posts are beveled to prevent splitting when the case is moved.

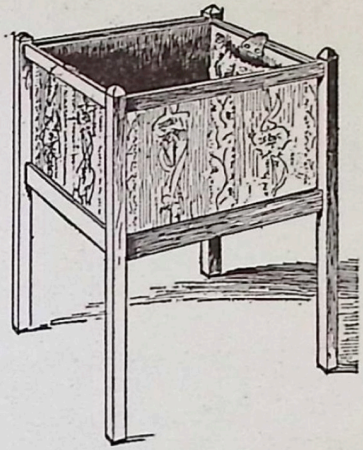
A back is made of thin V-jointed boards, fitted as described in detail in the instructions given for the box cabinet.

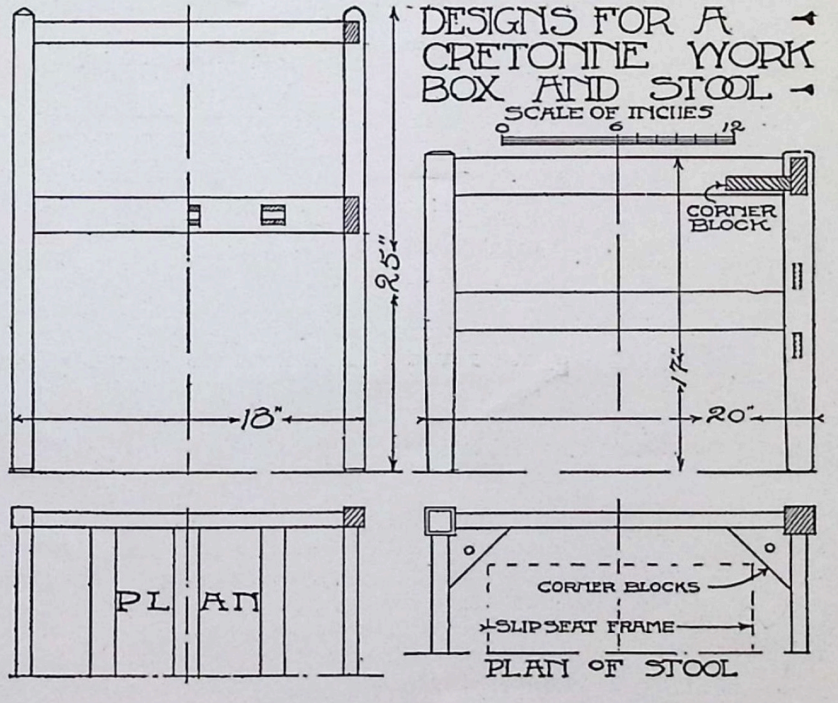


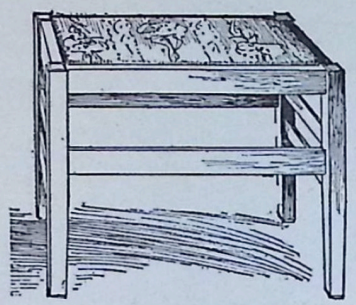
CRETONNE COVERED WORKBOX

THIS workbox and stool are designed as companion pieces to the cabinet; the frame of the workbox is 25 inches high and 18 inches square, the posts 1½ inches square, the top rails 1⅛ inches by ⅞ of an inch. The bottom rails are 2 inches by ⅞ of an inch. The three stretchers that support the box should be 1⅛ inches square. The rails are doweled to the posts, as their position forbids mortising, and care should be taken that the dowels do not interfere. The three stretchers in the bottom are mortised into the lower rail. All of the rails should be made flush with the inside of the posts so that the box will slip in and out easily. The detail of the box shows the way it is made with pockets for thread, thimbles and other sewing materials. It should be covered with cretonne in the same way as the boxes in the box cabinet and carefully lined. Two leather handles should be riveted to the sides so that the box may be easily lifted from its frame.









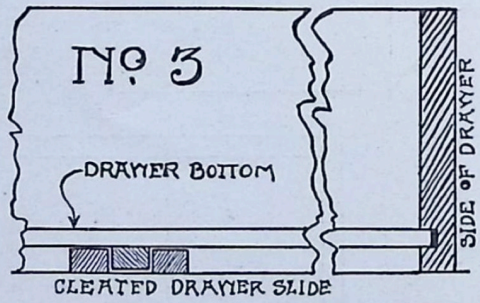
CRETONNE COVERED STOOL

THE construction of the stool is very much the same as that of the box frame on page 23. It is 17 inches high, 20 inches long and 16 inches wide. The posts are 1½ inches square and are tapered for about 6 inches at the bottom; the seat frame 2 inches by ⅞ of an inch; the front and back stretchers 2 inches by ½ inch, and the end stretchers 1¼ inches by ½ inch. The seat frame is mortised into the posts, which project to ¼ inch above the top of the stretchers. The lower stretchers are also mortised into the posts. The detail drawing hows the corner blocks, which support the frame for the slip seat. This seat is carefully padded and covered with cretonne. The dotted lines in the detail drawing show the wooden frame of the slip seat, over which the cretonne is stretched and fastened underneath. (For details see page 23.)

THE DRAWER CONSTRUCTION

THE front is generally about ¾ of an inch thick and the sides ½ inch thick, the back ⅝ or ¾ inch thick. The bottom is generally made of white wood paneling, crossgrained. If this is not at hand the bottom could be made of a single piece of wood ⅜ of an inch thick with the grain running across the narrow dimension of the drawer, for if the grain ran lengthwise of the drawer it would be apt to split.

The front and back ends are dovetailed to the sides. This is the principal feature of constructing a drawer. Care must always be taken in cutting the dovetails so that they fit tightly, holding the complete frame rigid. After the dovetails are cut and fit, the frame should then be heated slightly and the glue applied in the dovetails, then clamped together. The front end is wider than the back end, as the back end is only the width of the inside measurement of the drawer and allows the bottom to slip underneath. The front end has a groove cut across it for the bottom to slip into; the sides are also grooved.



DETAIL OF DRAWER

The frame is turned bottom up, and the bottom is slipped into the groove from the back and pushed towards the front. The bottom is not glued to the frame; it must have freedom to expand or shrink according to the temperature. It can be held in place by brads or small screws into the back end piece. For large drawers it is always best to use the white wood paneling with the grain crossed, which is, in other words, three-ply veneer. This is much stronger and is in no danger of cracking, and will not shrink or expand.

In each case the drawer is to fit a track or runner which is fastened to the case, and should be made of two cleats about 1 inch wide, ½ inch thick and the depth of the case. These cleats should be set apart to allow a third cleat, the same dimensions, to slide between. This third cleat is screwed in the center to the bottom of the drawer, then as the drawer is put in place this cleat prevents the drawer from sliding to one side or the other. To stop the drawer in the right position two small dowel pins about ¼ inch in diameter should be driven into holes bored into the frame, so that when the drawer is shoved in the inner side of the front piece stops against these pins. If these pins should be set farther back, of course the drawer will be allowed to extend that much farther into the case, as the drawer should never be made as deep as the case will allow; but there should always be about an inch or 1½-inch space between the back end of the drawer and the back of the case. The regular method of planing and sawing, of course, is used.

The Motto

"The Recollection of QUALITY Remains long after the PRICE is forgotten."—E. C. Simmons

TRADE MARK REGISTERED